

REMARKS

The Office Action dated September 12, 2005 has been reviewed carefully and the application has been amended in a sincere effort to place it in condition for allowance.

All objections and rejections are respectfully traversed.

Claims 1 and 2 were rejected under 35 USC § 103(a) as being unpatentable over United States Patent No. 6,175,634 which issued on January 16, 2001 to Graumann ("Graumann") in view of United States Patent No. 6,662,211 which issued on December 9, 2003 to Weller ("Weller").

Applicant's invention as set forth in representative claim 1 comprises in part:

A method of performing an audio conference of multiple attendees, including the steps of

(A) receiving input samples of PCM information from each attendee in the conference;

(B) calculating the energy of each sample for each attendee of the conference;

(C) selecting a predetermined number of samples that exhibit the highest energy;

(D) generating a histogram to determine one or more noise peaks;

(E) selecting one of said noise peaks as a noise floor;

(F) eliminating from the conference incoming samples that fall below said noise floor; and

(G) selecting for inclusion in said conference a predetermined number of the remaining samples whose energies are the largest, and summing a predetermined number of the remaining samples whose energies are the largest to produce an output signal.

In sharp contrast, the Graumann patent is a technique for suppressing noise in a single audio signal. Graumann teaches: "In particular, the portion 301 of the waveform

which exceeds a noise floor NF is considered to be speech energy, whereas the portions 302 of the waveform not exceeding the noise floor NF are considered to be only noise energy.” (Col. 4, lines 45-49). Thus, Graumann teaches evaluating the wave form of the signal, not generating a histogram of energy levels over a time period. Graumann further teaches that the half-duplex received channel 200 communicates with half-duplex transmit channel 201 to cause a microphone 53 to be muted in step 402. The microphone 53 remains muted until speech is no longer detected in the signal AUDIO RX. (Col. 4, lines 63-67) In other words, if there is incoming speech, then the microphone (*i.e.*, outgoing speech) is muted. This is in contrast to Applicant’s claimed invention which is used for performing a conferencing function. Applicants invention involves operations being performed upon incoming samples (as opposed to signals) when each sample is evaluated to determine whether it is noise and whether it is speech. If it constitutes noise, it is not sent to the conferencing portion of the process. If it is speech, then the energy is calculated and all the sample energies are evaluated to select the best several samples to be summed to form a conferenced output signal.

Thus, Graumann alone does not disclose, teach or render obvious Applicant’s invention. Graumann in combination with Weller still does not result in Applicant’s invention because neither Graumann nor Weller teaches Applicant’s claimed invention of first evaluating each sample to determine whether it is speech that should be included in the energy calculation step, and further evaluates whether the speech sample is to be included in the conferenced output. It does not simply mute or not mute incoming signals that are

above a noise floor. Thus, the combination of Graumann and Weller does not disclose, teach or render obvious Applicant's invention of claim 1.

With respect to claim 2, claim 2 involves a unique echo suppression technique which uses the *energies* already calculated for each sample during the predetermined time period and populates a matrix with energy aggregates that are calculated. This echo suppression technique is not disclosed or taught by either Graumann or Weller and thus the combination of the two references does not render obvious Applicant's invention as claimed in claim 2.

The Examiner did not provide a specific rejection of claim 3 and Applicant respectfully submits that claim 3 is patentable over the cited references. For example, the Oliver reference suggests DTMF clamping in that it states: "Any such DTMF signals are then removed by a DTMF clamping resource 706." The DTMF clamping resource 706 is not described, thus it assumed to be a conventional DTMF clamping device. In sharp contrast, Applicant uniquely employs finite impulse response filters 604 and 606 and selects from a bank of filters to remove the detected tones.

More specifically, the cited references are silent as to Applicant's step of *adjusting a filter to apply a coefficient that multiplies the signal by a predetermined amount in order to remove each row tone and each column tone to thereby remove the DTMF from the signal* as claimed in claim 3.

Accordingly, independent claim 3 is patentable over the cited references.

New claims 4-8 depend from what are believed to be allowable independent claims and therefore the dependant claims are also allowable.

Please do not hesitate to contact the undersigned in order to advance the prosecution of this application in any respect.

Please charge any additional fee occasioned by this paper to our Deposit Account No. 03-1237.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Rita M. Rooney", is written over a horizontal line.

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